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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/840,913 | 04/25/2001 | Masahiro Suzuki | 032378.01 | 6830 |
| 25944 | 7590 | 12/02/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | NGUYEN, LUONG TRUNG | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2612 | |

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,913

Applicant(s)

SUZUKI ET AL.

Examiner

LUONG T. NGUYEN

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 3/09/2005 have been fully considered but they are not persuasive.

In re page 9, Applicants argue that in Tsai both N and N+1 are not fixed.

In response, regarding claims 1, 7 and 12, Applicants amended these claims with the claim limitation "fixed first exposure amount" and "fixed second exposure amount". The Examiner considers that these claims as amended still do not distinguish over Tsai patent. Tsai discloses that electronic image sensors image of a scene captured at different exposure levels, for example, normal exposure range, called level N (the fixed second exposure amount); double the amount of light at N level, called level (N+1), (the fixed first exposure amount); half the amount of light at level N, called level (N-1), (the fixed third exposure amount), (column 3, lines 1-18, column 4, lines 55-65). Each of these level occur at each corresponding exposure time, for example exposure time of 1/30 second, 1/60 second, 1/100 second, therefore, these levels represent for fixed exposure amounts.

In re page 9, Applicants argue that the Office Action does not identify what in Tsai allegedly corresponds to the first or second output.

In response, the Examiner considers that Tsai discloses the electronic image sensor 120 outputs image data of images of a scene captured at different exposure levels, for example, N+1, N, and N-1 (figure 1, column 3, lines 1-18). This corresponds to the first or second output.

In re page 10, the Applicants argue that Tsai does not teach or suggest that

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the output of the electronic image sensor 120 is determined when the normal exposure level N or the level above the normal exposure level N+1 is set by the camera control processor 170 without calculating the exposure amount and the subject is photographed.

In response, regarding claim 1, Applicant amended claim 1 with limitation “a calculation device that calculates the exposure to be set by the setting device, wherein a first output of the photoreceptor device is determined when a fixed first exposure amount is set by the setting device without calculating the exposure amount and the subject is photographed, a second output of the photoreceptor device is determined when a fixed second exposure amount is set by the setting device without calculating the exposure amount and the subject is photographed.” The Examiner considers that claim 1 as amended still does not distinguish from Tsai. Tsai discloses the camera control processor 170 (setting device), in response to a signal received from the operation control 180, controls the operation of the camera 100 to capture multiple images of a scene at five different exposure levels N+1, N+1/2, N, N-1, and N-1/2 (figure 1, column 4, line 66 through column 5, line 9; note that the output of image sensor is determined when camera control processor 170 sets at each corresponding exposure level N+1, N+1/2, N, N-1, and N-1/2; the camera control processor 170 does not calculate exposure amount).

Claim Objections

2. Claims 1-4, 7-9, 12, 15 are objected to because of the following informalities:

Claim 1 (line 15), claim 2 (line 7), claim 3 (line 2), claim 4 (lines 1-2), claim 7 (line 14), claim 8 (line 8), claim 9 (lines 1-2), claim 12 (line 14), claim 15 (lines 2, 3), “the first exposure amount” should be changed to --the fixed first exposure amount--;

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Claim 1 (lines 15-16), claim 2 (lines 7-8), claim 2 (line 8), claim 3 (line 2), claim 4 (line 2), claim 7 (lines 14-15), claim 8 (line 9), claim 8 (lines 9-10), claim 9 (line 2), claim 12 (line 14), claim 15 (lines 2, 3, 4), "the second exposure amount" should be changed to --the fixed second exposure amount--;

Claim 2 (line 9), claim 3 (line 2), claim 4 (line 2), claim 8 (line 10), claim 9 (line 2), claim 15 (lines 4-5), claim 16 (line 2), "the third exposure amount" should be changed to --the fixed third exposure amount--;

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (lines 10-11), claim 2 (lines 4-5), claim 7 (line 8), claim 8 (lines 4-5), recite the limitation "the" in "the exposure amount". There is insufficient antecedent basis for this limitation in the claim.

Claims 2-6 are rejected as being dependent on claim 1.

Claims 8-11 are rejected as being dependent on claim 7.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsai (US 5,309,243).

Regarding claims 1 and 2, Tsai discloses a method and apparatus for extending the dynamic range of an electronic imaging system, comprising an electronic camera, disclosed as an electronic camera 100 (figure 1, column 4, line 30-35); a photoreceptor device, disclosed as, electronic image sensor 120 (figure 1, column 4, lines 45-55); a setting device, disclosed as camera control processor 170 (figure 1, column 4, line 66 through column 5, line 8); a calculation device, disclosed as electronic data processing unit 300 (figure 1, column 2, lines 8-45, column 4, line 66 through column 5, line 54); fixed first exposure amount, disclosed as double amount of light at level N, called level (N+1), (column 5, lines 1-54); fixed second exposure amount, disclosed as normal exposure range, called level N (column 5, lines 1-54); fixed third exposure amount disclosed as half the amount of light at level N, called level (N-1), (column 5, lines 1-54); optimum exposure amount, disclosed as the amount of light at geometric means level between level N and level (N+1), called level (N+1/2), (column 5, lines 1-54); a prescribed value, disclosed as half amount of difference between amount of light at normal exposure level N and level (N+1).

Tsai also discloses the electronic image sensor 120 output image data of images of a scene captured at different exposure levels, for example, N+1, N, and N-1 (figure 1, column 3,

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lines 1-18, N+1, N, N-1, each corresponds to the first output, the second output, the third output, respectively. Note that camera control processor 170 does not calculate exposure amount, it sets exposure amount at different exposure levels, column 4, line 66 through column 5, line 9);

Regarding claims 4 and 9, Tsai discloses the first exposure amount, the second exposure amount and the third exposure amount correspond to different shutter speed (column 6, lines 11-25).

Regarding claims 5 and 10, Tsai discloses a memory device as framestore 200 (figure 1, column 4, lines 54-64).

Regarding claims 6 and 11, Tsai discloses the electronic camera continues to change the selected exposure amount until an output of the photoreceptor device corresponding to the selected exposure amount is within a predetermined range of the optimum exposure amount (column 5, lines 1-54).

As to claims 7 and 8, see examiner's comments regarding to claims 1 and 2.

As to claims 12-17, claims 12-17 are method claims of apparatus claims 1-2 and 4-5.

Therefore claims 12-17 are rejected for the reasons given respect to claims 1-2 and 4-5.

Claim Rejections - 35 USC § 103

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (US 5,309,243) in view of Chatenever et al. (US 5,162,913).

Regarding claim 3, Tsai fails to specifically disclose a ratio of the first exposure amount, the second exposure amount and the third exposure amount is substantially 1:8:64. However, Chatenever et al. teach an apparatus for automatically adjusting the exposure of the video images, which may be employed at exposure times of 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000 seconds (column 8, lines 20-25). It is notoriously well known in the art that at each desired fixed exposure times, such as 1/30, 1/250 and 1/2000, which show the ratio 1:8:64, there is an exposure amount is set, respectively. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the camera in Tsai by the teaching of Chatenever et al. in order to let the user selects freely a desired exposure time.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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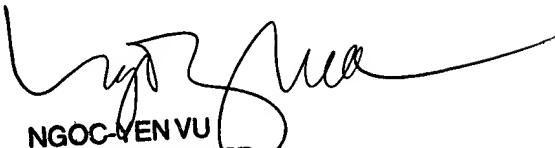
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGOCYEN VU can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/27/05


NGOC-YEN VU
PRIMARY EXAMINER